

Appl. No. 10/789093

REMARKS

The following remarks are in response to the Office Action mailed on July 6 2005. Upon entrance of the amendments set out above, Claims 1-7, 9-23, 43, 44, 49-56, 58 and 80-82 remain pending in this application.

Claims 5-7 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claims 1 and 2 were rejected under 35 U.S.C. 102(b). Claims 3, 4, 8-14, 17-21, 24-26, 29-31, 39-44, 49-56-59, 61, 63, 64, and 79 were rejected under 35 U.S.C. 103(a). Response is hereby made to these rejections. Claims 5-7, 22, 23, 27, 28, 47, and 48 were indicated as having patentable subject matter. Claims 80-82 are allowable over the prior art of record.

Claims 5-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite because the Examiner held claim 5 specifies a wire with a non-metallic core composition, and depends from claim 4 which specifies a metal-cored wire (claims 6 and 7 depend from claim 5).

Metal core wire is comprised of alloys which are part metal, and part other substances. For example, the compound of claim 6, includes potassium, manganese, tin and oxygen. That is part of a metal core because the potassium compound includes metal. Similarly, the wire of claim 5 can be metal core, so long as it includes metal. Thus, Applicants respectfully submit that claims 5, 6 and 7 are not indefinite.

Claims 1 and 2 were rejected under 35 U.S.C. 102(b) as being anticipated by Stava (6,111,2 16). Claim 1 has been amended to recite that a workpiece have a weld path with a groove having an angle of less than 50 degrees. Thus, Stava does not anticipate claim 1.

Canceled claim 8 included the 50 degree limitation, and was rejected by the Examiner under 35 U.S.C. 103(a) as being unpatentable over Stava (6,111,216). The Examiner held that it

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is considered obvious that the system of Stava (6,111,216) be adjusted to the values of the welding parameters set forth or be used with welding grooves having the claimed geometry, based on routine engineering choices.

Applicants respectfully submit that it would not be obvious to provide such an angle. Nothing in the prior art suggests that it is possible, and high deposition welding is performed with a wide groove. Nothing in the prior art suggests a groove angle of any range is merely a matter of engineering choice. Thus, Applicants respectfully submit that claim 1, and claims 9-18 should be allowed.

Independent claim 19 has been similarly amended to include the groove limitation, and thus claims 19, and 20-23, which depend therefrom, should also be allowed.

Claim 43 was rejected under 35 U.S.C. 103(a) as being unpatentable over Stava (6,111,216) taken with Woodacre (4,092,517). The Examiner held it obvious to use an initially negative start period with the system of Stava (6,111,216), in view of the teachings of Woodacre that such is advantageous for a pulsating a.c. power supply, relying specifically on figures 3a - 3g in Woodacre and the discussion thereof.

Applicants respectfully submit that claim 43 requires more than an initial start period -- it requires that "the weld process begins with the negative portion of at least 0.5 seconds duration". Nothing in Woodacre teaches that duration. Indeed, to the extent Woodacre teaches a duration it is that a negative period having a duration of perhaps 2 to 3 times the duration of subsequent cycles (one cycle including the negative and positive phases) is sufficient for starting. As the Examiner pointed out, Stava suggests frequencies as low as 40Hz. One cycle at 40 Hz lasts 0.025 seconds. Thus, applying Woodacre to Stava would result in an initial negative time of less than 0.1 seconds --

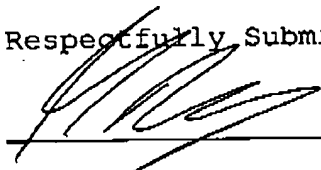
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much less than the claimed 0.5 seconds. Thus, claim 43, and claim 44, which depends therefrom, should be allowed.

Independent claim 49 includes a similar limitation that the process start with 0.5 seconds EN. Thus, claim 49, and claims 50-57 and 58, which depend therefrom, should be allowed.

The remaining independent claim, 80, has been allowed. Accordingly, in view of the above amendments and remarks, Applicants respectfully submit that the application should be allowed. The Examiner is invited to telephone the undersigned below if it will aid in the prosecution of this application.

Respectfully Submitted



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